



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Am

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,214	02/26/2002	Louis H. Odenwald	01-922	5634

24319 7590 05/05/2005

LSI LOGIC CORPORATION
1621 BARBER LANE
MS: D-106
MILPITAS, CA 95035

EXAMINER

JOO, JOSHUA

ART UNIT	PAPER NUMBER
----------	--------------

2154

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/083,214	Applicant(s) ODENWALD, LOUIS H.	
	Examiner Joshua Joo	Art Unit 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6-13, 17-23 and 26-42 is/are rejected.
- 7) ☒ Claim(s) 2-5, 14-16, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2154

1. Claims 1-42 are presented for examination.
2. Claims 1, 6-13, 17-23, 26-42 are rejected.

Allowable Subject Matter

3. Claims 2-5, 14-16, 24-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Objections

4. Claim 39 is objected to because of the following informalities: Claim 39 is the same as claim 38, where both claims depend on claim 27. Appropriate correction is required.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Art Unit: 2154

6. Claims 19-22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-5 of US Patent #6,728, 789 in view of Swank, US Patent #6,697,924.

7. The instant application, which teaches of a controller communicatively coupled to the at least one port communicatively coupling the input/output interface with the host and the at least one port communicatively coupling the input/output interface with the target, wherein the controller receives an identifier including a bus field and an ID field from the host, the controller shifts at least one of the bus field and the ID field into a linear value to generate a logical identifier, the logical identifier suitable for being utilized in conjunction with a look-up table to provide access to the target, are common subjects with claim 1 of Patent #6,728, 789.

8. The difference between the instant application and Patent #6,697,924 is that the controller includes a target masking utility.

9. Swank teaches of filter drivers that contain masking utilities to mask the identifiers of the storages (Col 34, lines 37-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a masking utility because doing so would prevent hosts from accessing unassigned storages.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

Art Unit: 2154

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 27, 30-36, 38-41 are rejected under 35 U.S.C. 102(e) as being unpatentable by Swank, US Patent #6,697,924.

12. As per claim 27, Swank teaches an invention where a plurality of hosts, connected to fiber channel, issue requests to access a plurality of storage devices residing on a SAN.

Swank's invention comprises of:

a plurality of targets (Col 21, line 49. Storage devices.);

plurality of input/output interfaces, each input/output interface being coupled to a host and at least one of the plurality of targets, each input/output interface being coupled to a host and at least one of the plurality of targets, each input/output interface having a target masking configuration utility for allocating at least one of the plurality of targets to the input/output interface (Fig. 1; Fig. 23; Col 21, lines 47; Col 34, lines 37-39; Col 60, lines 30-34. Plurality of hosts are connected to a plurality of storage devices. An I/O control corresponds to the filter driver, where the filter driver resides within each host. The filter driver provides masking of the LUNs.); and

one of the group consisting of a fabric, a loop, or a combination of a fabric and a loop which allows communications between the input/output interface and the plurality of targets (Col 22, lines 39-39. Interconnect is fiber channel fabric.) ,

wherein the targets allocated to an input/output interface are fewer than all the plurality of targets (Col 34, lines 40-41. List comprises of assigned storage devices.).

Art Unit: 2154

13. As per claim 30, Swank teaches the multithost system of claim 27, the input/output interface further comprising an agent for communicating with agents of other input/output interfaces (Col 22, lines 27-28; Col 23, lines 1-12. Host communicates with each other. Host has agents.).

14. As per claim 31, Swank teaches the multithost system of claim 30, wherein only input/interface has the target masking configuration utility (Col 34, lines 37-49. Col 60, lines 30-34. I/O corresponds to the filter driver. Filter driver masks LUNs.).

15. As per claim 32, Swank teaches the multithost system of Claim 30, wherein a local area network provides the means of communication between the agents of the plurality of input/output interfaces (Col 22, lines 27-28. LAN.).

16. As per claim 33, Swank teaches the multithost system of Claim 27, wherein each of the plurality of input/output interfaces has a target masking configuration utility (Col 23, lines 1-2; Col 34, lines 37-49. Filter driver, masking LUNs, resides on an agent. Agent is found in hosts.).

17. As per claim 34, Swank teaches the multithost system of Claim 33, wherein the target masking configuration utilities are in communication with each other through the one of the group consisting of a fabric, a loop, or a combination of a fabric and a loop (Col 22, lines 35-38. Host communicates with each other. Interconnect comprises fiber channel loop.).

18. As per claim 35, Swank teaches the multithost system of Claim 27, wherein each of the plurality of input/output interfaces is allocated with a single target in a one-to-one

Art Unit: 2154

correspondence. (Col 30, lines 9-11; Col 34, lines 37-49. The host is presented with a list of only assigned storage devices. The host may access the assigned LUNs of storage devices.).

19. As per claim 36, Swank teaches the multihost system of Claim 27, wherein at least one of the plurality of input/output interfaces is allocated with two or more targets (One or more LUNs can be assigned to hosts.).

20. As per claims 38 and 39, the Swank teaches the multihost system of Claim 27, wherein the allocation of the target to an input/output interface causes that target to appear invisible to the host coupled to the input/output interface (Col 34, lines 43-45. Filter driver masks the storage device, which was visible to the host.).

21. As per claim 40, Swank teaches an invention where a plurality of hosts, connected to fiber channel, issue requests to access a plurality of storage devices residing on a SAN.

Swank's invention comprises of:

determining whether a target has been allocated to a host; and if the target has been allocated, then determining whether the target is to be deallocated, otherwise, proceeding to the next target (Col 38, lines 5-19. List of LUNs is presented, which determines if a LUN has been assigned and may be used to un-assign the LUN.).

22. As per claim 41, Swank teaches the method of claim 40, if it is determined that the target is to be allocated, deallocating the target, otherwise, allocating the target according to a user defined rule (Col 38, lines 11-19. At the request of the administrator, the storage device is unassigned and reassigned to a host.).

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. Claims 1, 6-13, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable by Sjolander et al, US Patent #6,587,959 (Sjolander hereinafter) and in view of Swank, US Patent #6,697,924.

25. As per claim 1, Sjolander teaches a method for accessing a hardware device by a host wherein a unique identifier is used for accessing a look-up table that provides access between a host server and the target device. Sjolander's invention comprises of:

at least one port communicatively coupling the input/output interface with a host (Fig 3; Col 3, lines 44-47. Host connects to server.);

at least one port communicatively coupling the input/output interface with a target (Fig 3; Col 3, lines 44-51. Hardware.); and

a controller communicatively coupled to the at least one port communicatively coupling the input/output interface with the host and the at least one port communicatively coupling the input/output interface with the target (Fig. 3; Col 3, lines 44-51; Col 4, lines 2-3. Server connects to host and target. Server ports connects the target.), wherein the controller receives an identifier from the host, the identifier indicating the target's address (Col 5, lines 24-26; 37-39. Server receives the unique identifier, which contains hardware identifier.), the controller

Art Unit: 2154

generates a logical identifier from the identifier, the logical identifier suitable for being utilized in conjunction with a look-up table to provide access to the target (Col 4, lines 44-57; Col 5, lines 24-44. Server receives the hardware identifier and uses the look-up table to locate the corresponding local path to the hardware.).

26. Sjolander does not teach wherein the target is selectively allocated to one and only one host.

27. Swank teaches an invention for hosts accessing storage devices, where the host is presented with a list of only assigned storage devices. The host may access the assigned LUNs of storage devices (Col 30, lines 9-11; Col 34, lines 37-49).

28. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sjolander and Swank because both inventions deal with accessing storage devices through the use of storage identifiers. The teaching of Swank to assign a storage device to one host prevents multiple hosts from accessing a storage device and prevents hosts from accessing unassigned storage devices.

29. As per claim 6, Sjolander teaches the input/output interface as described in claim 1, wherein the logical identifier is utilized to index the look-up table (Col 4, lines 44-51; Col 5, lines 24-27, 41-44. Server uses a look-up table to locate the identifier and retrieves corresponding local path of the hardware. Look-up table includes an association between the hardware address and the local path.).

Art Unit: 2154

30. As per claims 7 and 8, Sjolander does not teach the input/output interface as described in claim 1, wherein the target is selectively allocated by a target masking configuration utility, where the target masking configuration is implemented as a software program.

31. Swank teaches of masking the identifiers to selectively allocate storage devices, where masking is implemented by software (Col 34, lines 44-49; Col 70, lines 24-25; Col 73, lines 55-66).

32. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sjolander and Swank because both inventions deal with accessing storage devices through the use of storage identifiers. The teaching of Swank to mask the identifiers prevents hosts from improperly accessing unassigned storage devices.

33. As per claims 9, 10, 11, Sjolander does not teach the input/output interface as described in claim 7, wherein the target masking configuration utility communicates with at least on other target masking configuration utility, wherein the target masking filter is wholly contained within the input/output interface and communicates with at least one other host through an agent contained within the input/output interface, and the agent of the input/output interface is in communication with other agents of other input/output interfaces of other hosts.

34. Swank teaches that hosts can communicate with each other, where agents are implemented in the hosts. The filter driver, which resides within the agent, performs target masking. Hosts also communicate to a SAN manager, which provides to the agents assigned LUN IDs for masking (Col 22, lines 27-28; Col 34, lines 37-49; Col 44, lines 21-33.).

Art Unit: 2154

35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sjolander and Swank because both inventions deal with accessing storage devices through the use of storage identifiers. The teachings of Swank to implement agents to communicate with each other hosts allows a host to gather information regarding other hosts status and configuration.

36. As per claim 12, Sjolander does not specifically teach the input/output interface as described in claim 11, wherein the communication is through a local area network (LAN).

37. Swank teaches the hosts and storage devices are implemented in a LAN (Col 22, lines 27-29).

38. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sjolander and Swank because both inventions deal with accessing storage devices through the use of storage identifiers. The teachings of Swank to use a LAN allows hosts to access the same database and allows for faster transmission of data.

39. As per claim 13, Sjolander teaches a method for accessing a hardware device by a host wherein a unique identifier is used for accessing a look-up table that provides access between a host server and the target device. Sjolander's invention comprises of:

receiving an identifier including a bus field and an ID field from the host (Col 4, lines 49-51; Col 5, lines 50-53. Port and Bus information.);

generating a logical identifier from the received identifier (Col 4, lines 49-57. Look-up table is used to associate between hardware address and local path.);

Art Unit: 2154

referencing a look-up table utilizing the logical identifier to provide access to the target Col 4, lines 49-57. Look-up table is used to associate between hardware address and local path.).

Sjolander does not teach of allocating the target to the input/output interface via integrated target masking.

40. Swank teaches of masking the identifiers to selectively allocate storage devices, where masking is implemented by software (Col 34, lines 44-49; Col 70, lines 24-25; Col 73, lines 55-66).

41. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sjolander and Swank because both inventions deal with accessing storage devices through the use of storage identifiers. The teaching of Swank to mask the identifiers prevents hosts from accessing unassigned storage devices.

44. As per claim 17, Sjolander does not teach the method as described in claim 13, wherein at least one of the bus field and the ID field is 8-bits. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make fields 8-bits because 8-bits allows for the smallest unit of address storage in the memory of a computer.

42. As per claim 18, Sjolander teaches the method as described in claim 13, wherein referencing includes utilizing the logical identifier to index the look-up table (Col 4, lines 49-57. Look-up table is used to associate between hardware address and the local path.).

Art Unit: 2154

45. Claims 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable by Sjolander, US Patent #6,587,959 and in view of Blumenau, US Patent #6,839,747, Dobberpuhl et al, US Patent #6,754,718 (Dobberpuhl), and Swank, US Patent #6,697,924, and

46. As per claim 23, Sjolander teaches a method for accessing a hardware device by a host wherein a unique identifier is used for accessing a look-up table that provides access between a host server and the target device. Sjolander's invention comprises of:

at least one means for communicatively coupling the input/output interface with a host (Fig 3; Col 3, lines 44-47. Server.);

at least one means for communicatively coupling the input/output interface with a target (Fig 3; Col 3, lines 44-51. Hardware.); and

a means for controlling communicatively coupled to the at least one port communicatively coupling the input/output interface with the host and the at least one port communicatively coupling the input/output interface with the target (Fig. 3; Col 3, lines 44-47; Col 4, lines 2-3. Host is connected to the server, which is connected to the target.), wherein the controller receives an identifier including an ID field from the host (Col 5, lines 24-26; 37-39. Server receives the unique identifier, which contains hardware identifier.), the controller means generates a means for logically identifying the from the received identifying means, the logical identifying means suitable for being utilized in conjunction with a look-up table to provide access to the target (Col 4, lines 44-57; Col 5, lines 24-44. Server receives the hardware identifier and uses the look-up table to locate the corresponding local path to the hardware.).

47. Sjolander does not teach the controlling means including a target masking configuration utility which selectively assigns the target to one of two or more hosts.

Art Unit: 2154

48. Blumenau teaches a system for managing storage in a storage system, where storage devices are assigned to multiple hosts (Col 28, lines 47-51).

49. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sjolander and Blumenau because both teachings deal with accessing storage devices over a network. The teaching of Blumenau to assign a storage device to multiple hosts would increase the efficiency of Sjolander's teachings so that hosts do not have to wait until a storage device is available.

50. Sjolander does not teach of receiving an identifier including a bus field. Dobberpuhl teaches of transmitting an identifier that contains the identifier of bus information (Col 3, lines 1-5; Col 4, lines 56-58).

51. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sjolander, Blumenau, and Dobberpuhl because all the teachings deal with accessing storage devices over a network. The teachings of Dobberpuhl to including bus information in the identifier would enhance the teachings of Sjolander because the look-up table of Sjolander's system would not require bus information for a complete local path.

52. Sjolander and Blumenau do not disclose of selectively assigning the targets to one of two or more hosts so that the look-up table is populated with fewer targets than a maximum number of targets. Swank teaches of masking the identifiers to selectively allocate storage devices and generating a list that is populated with just assigned LUNs (Col 34, lines 37-49; Col 70, lines 24-25; Col 73, lines 55-66).

53. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sjolander, Blumenu, and Swank because all inventions deal with accessing storage devices through the use of storage identifiers. The teaching of Swank to mask the identifiers prevents hosts from accessing unassigned storage devices.

54. As per claim 26, Sjolander teaches the input/output interface, wherein the logical identifier is utilized to index the look-up table (Col 4, lines 44-51; Col 5, lines 24-27, 41-44. Server uses a look-up table to locate the identifier and retrieves corresponding local path of the hardware. Look-up table includes an association between the hardware address and the local path.).

55. Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable by Swank in view of Sjolander, US Patent #6,587,959.

56. As per claim 28, Swank teaches of the plurality of input/output interfaces having a controller communicatively coupled to at least one port communicatively coupling the input/output interface with the host and at least one port communicatively coupling the input/output interface with the target (Fig. 1; Fig. 23. Col 21, lines 47-49; Col 45, lines 37-46; Col 46, lines 31-35. Plurality of hosts are connected to a plurality of storage devices. Host contains controllers, where the ports are connected to storage devices.).

57. Swank does not teach wherein the controller receives an identifier from the host, the identifier indicating the target's address, the controller generates a logical identifier from the identifier the logical identifier suitable for being utilized in conjunction with a look-up table to provide access to the target.

58. Sjolander teaches of server that uses a look-up table and retrieves a local path to the hardware than corresponds to a received hardware identifier. Look-up table includes an association between the hardware address and the local path. Identifier contains port and bus information (Col 4, lines 44-57; Col 5, lines 24-27, 41-44).

59. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Swank and Sjolander because both inventions deal with accessing storage devices over a network. The teachings of Sjolander to receive a hardware identifier and to use a look-up table to retrieve an identifier for a local path to the storage device conserves bandwidth because only the hardware identifiers need to be sent to the client upon initialization rather than every path for the device.

60. As per claim 29, Swank and Sjolander taught the mulithost system of claim 28. Swank further teaches wherein only those targets which pass a user defined filter are entered into the look-up table which uses the logical identifier so as to mask the visibility of those targets from the host (Col 34, lines 37-49. Filter driver has a list of assigned LUNs. Filter driver masks LUNs.).

61. Claims 37 are rejected under 35 U.S.C. 103(a) as being unpatentable by Swank in view of Blumenau, US Patent #6,839,747.

62. As per claim 37, Swank does not teach the multihost system of Claim 36, wherein at least one target is allocated to two or more input/output interfaces.

Art Unit: 2154

63. Blumenau teaches a system for managing storage in a storage system, where storage devices are assigned to multiple hosts (Col 28, lines 46-51).

64. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sjolander and Blumenau because both inventions deal with accessing storage devices over a network. The teaching of Blumenau to assign a storage device to multiple hosts increases the efficiency of Sjolander's invention so that hosts do not have to wait until a storage device is available.

65. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable by Swank in view of Jenkins et al, US Patent #4,470,111 (Jenkins hereinafter).

66. As per claim 42, Swank does not teach the method of claim 41, if a target is allocated to more than one input/output interfaces, then assigning a priority order for the target.

67. Jenkins teach the concept of a plurality of devices accessing a host, where a priority order is assigned (Col 1, lines 22-29).

68. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Swank and Jenkins because the teachings of Jenkins to assign a priority improves the teachings of Jenkins by allowing it to avoid conflicts that can arise between devices that are trying to access the host.

69. Claims 19-22 are rejected under double patenting but would be in condition for allowance if the applicant overcomes the double patenting rejection.

Art Unit: 2154

Conclusion

70. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

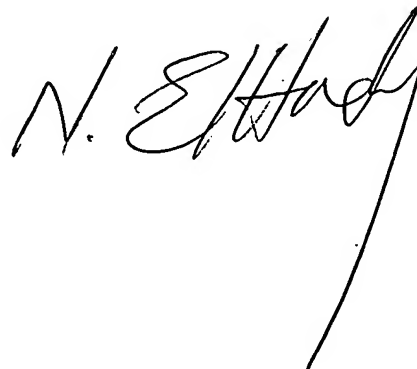
71. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Friday 7 to 4.

72. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on 571 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

73. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 26, 2005

JJ

A handwritten signature in black ink, appearing to read "N. E. Hardy", with a long, sweeping vertical line extending downwards from the end of the signature.